

World Potato Atlas : Congo (DRC)

This page last changed on Oct 09, 2006 by [ktheisen](#).



CONGO

DEMOCRATIC REPUBLIC OF THE

About the Potato Atlas Archives...

The first World Potato Atlas was developed at the International Potato Center (Centro Internacional de la Papa, or CIP) in the 1980s and maintained for several years -- primarily by Robert Rhoades, Robert Hijmans, and Luisa Huaccho -- to provide country-specific information about potato production, constraints, and uses. A newer version of the atlas, providing updated and more detailed information of a limited selection of countries, was initiated in 2006.

The "atlas archives" included here are based on chapters of the original effort which so far have not been substantially updated. Although some of this information is clearly obsolete, some remains relevant, at least for historical background.

HISTORY AND OVERVIEW

The potato most likely reached the territory of the Democratic Republic of the Congo (DRC, formerly Zaire) in the late nineteenth century, but the precise circumstances and dates are unknown. Limited research, variety screening and introductions began under Belgian colonial administration in the 1940s. Between 1944 and 1948, a wide diffusion of the crop and new varieties took place (Mundundu, 1981). Potato research came to a halt in 1960 and was not resumed until 1980 when the government took a renewed interest in potato research and extension. A potato program was established under the auspices of the *Institut National pour l'Étude et Recherche Agronomiques* (INERA) in cooperation with the International Potato Center (CIP) (Mundundu, nd).

Since 1960, the area and production of potatoes in DRC have increased dramatically. Haverkort (1983) notes that DRC contains roughly three times as much high altitude area (above 2,000 meters above sea level, or masl) as Rwanda. These highland areas of DRC support some six million people. Estimates of potato production, however, are extremely variable. FAO (1986) estimates for 1982 indicate a total production of 32,000 tons and an area of 7,000 hectares. In contrast, another estimate for the Kivu region alone in the same year (*Cabinet du Gouverneur de la Région de Kivu*, 1982) concluded that some 157,674 tons of potatoes were produced on over 28,000 hectares.

GEOGRAPHY AND PRODUCTION ZONES

By far the most important production areas are the highlands in the eastern part of the country along the Nile-Congo divide. In this region, potatoes grow best at elevations of at least 1,800 masl. Suitable areas are found in the regions of Haut-Zaire, Kivu, and Shaba. Kivu Region, occupying the center of the country's eastern border, accounts for 50-85 percent of the country's potato production, of which some

90 percent is concentrated in the subregion of North Kivu. Some production is also reported in the western part of the country in Bandundu and Bas-Zaïre regions (Scott, 1988; Vandenpeet, 1981).

PRODUCTION SYSTEMS AND CONSTRAINTS

Potatoes may be harvested throughout the year, although two major seasons and one minor season predominate. The most important crop is planted on rainfed hillsides in October and November. Harvest generally occurs in March or April, but may be extended into May. A second rainfed crop is planted in April and harvested from August to October. This second rainfed crop is also grown on hillsides at high altitudes. At lower elevations a common practice is to plant potatoes in low-lying, swampy areas during the dry season (Scott, 1988).

Little detailed information is available on potato production practices in DRC. Purchased inputs such as fertilizers, pesticides, and heavy machinery are rarely used. In the geographically isolated highlands where most potatoes are grown, modern agricultural inputs are simply not available, and most farmers could not afford them if they were. Farmers rely on hand tools and family labor, using retained from previous harvests or obtained from neighbors. Seed rates reportedly average about 1,100 kilograms per hectare (kg/ha), although in north Kivu large seed tubers and close spacing reportedly lead to seed rates of up to 3,000 tons per hectare (t/ha) (Scott, 1988).

Biological constraints are reported to include the fungal diseases late blight (*Phytophthora infestans*) and *Verticillium albo-atrum*, early blight (*Alternaria solani*), and potato wart (*Synchytrium endobioticum*). Bacterial diseases are also major problems, especially bacterial wilt (*Pseudomonas solanacearum*), blackleg and soft rot (*Erwinia* spp.), and *Actinomyces scabies*. Mosaic virus is another serious problem. Major predators include root-knot nematodes (*Meloidogyne* spp.) and various unnamed insects (Vandenpeet, 1981).

VARIETIES AND SEED SYSTEMS

The most widely grown variety throughout the country, and particularly in North Kivu, is Saseni. Introduced from Uganda in the 1970's, this variety is appreciated for its resistance to late blight (*Phytophthora infestans*) and a fungus (*Verticillium albo-atrum*) and its long vegetative cycle which permits farmers to avoid labor constraints by harvesting over a three month period up to six months after planting (Scott, 1988).

Longer established varieties, introduced prior to 1960, include Sientje, Nervea, Marita, Deka, Tendria, Libertas, Profit, Eigenheimer and Pimpernel (Bouwe Nasona Wa Baseko, 1983). Sientje, with a vegetative cycle of 100-110 days, is perhaps the most important of these, but all are subject to viral degeneration. Since 1980, small quantities of new varieties have been distributed by the national potato program. These include Atsimba, Montsamba, and Sangema (Scott, 1988).

Except for a very small amount of improved seed distributed by the national potato program, farmers set aside their own seed from each harvest.

CONSUMPTION, STORAGE, AND MARKETING

Consumption

Potatoes in DRC are generally consumed very close to where they are grown, most often as a household subsistence crop. Potatoes are not an item in the regular diet of most people in the DRC (where national average per capita consumption is only about one kilogram), but in areas of concentrated cultivation, the crop is locally very important. In higher altitude areas of North Kivu, for example, annual per capita consumption can reach 200 kilograms for people living in potato-growing households (Scott, 1988).

In provincial urban areas accessible by ground transport from major production areas, potatoes are a common food among middle and higher income groups. Annual per capita consumption is estimated at 13.1 kilograms in the city of Goma. In Kinshasa and other urban areas isolated from production zones, potatoes are mostly eaten by high income groups. Average per capita consumption in Kinsangani, for instance was estimated at one kilogram for the population as a whole, and 75 kilograms for resident expatriates (Scott, 1988).

Potatoes are usually prepared by boiling in production areas. Among producers and rural consumers generally there seems to be little concern over external appearance, color, shape, etc. Wealthy consumers in the capital, however, prefer highly uniform, sparkling-clean potatoes that are neatly packaged (Scott, 1988). Some consumers in Kinshasa also reportedly choose round over oblong potatoes. In urban areas french fried potatoes are commonly served in hotels and restaurants. Presently no industry for processing potatoes into snacks, alcohol, or starch is found (Scott, 1988).

Storage

Potatoes are stored on the floor in houses, in stone jars, and in large bamboo baskets. No information is available on whether seed and ware stored differently, although this appears not to be the case. In 1982, three diffused light storage (DLS) facilities were reported in operation at agricultural research stations in DRC and an additional one at a rural development project. Limited advances have been made in the adoption of storage innovations by Congolese farmers (Haverkort, nd).

Marketing

Except for a very minor export trade to Burundi (annually less than 20 tons), the entire national production is utilized within the country. Officially reported imports are less than 500 tons per year, mostly South African and European potatoes marketed in Kinshasa. An unknown quantity of potatoes is brought in by small scale producers and itinerant traders from Rwanda (Scott, 1988). Most farmers sell considerably less than half of their potatoes, although the exact proportion is unknown.

Scott (1988) distinguishes three levels at which potatoes are marketed in north Kivu:

- Local: Transactions are small, irregular, and informal. Payment may be in cash, labor, or barter, including repayment of potatoes at a later date
- Regional: A much more formal regional trade provides potatoes to urban markets accessible by truck from the producing regions. Trucker/traders transport potatoes from North Kivu to wholesalers/retailers in Goma and to cooperatives in Butemo, among other regional markets.
- Interregional: Marketing channels transfer potatoes from production areas such as north Kivu to distant urban markets through an elaborate chain of middlemen. Typically this involves transfer through several merchants by various combinations of transport including trucks, riverboats, light planes, and jet aircraft. The most important urban market is Kinshasa, DRC's capital. Presumably some of the potatoes grown in the nearby regions of Bas-Zaïre and Bandundu are also marketed here (Scott, 1988).

REFERENCES

Bandundu, N. nd. Pomme de Terre au Zaire: Reprise de la Selection et Perspectives d'Avenir. Institut National pour l'Étude et Recherche Agronomiques.

Bouwe Nasona Wa Baseko 1983. La recherche en champs de agricultures. Les activités réalisées au Zaire (Sud- Kivu) 1981-1983) En Seminaire "La recherche en champs d'agriculteurs" appliquée à la culture de la pomme de terre. PNAP - CIP - PRAPAC, 1983

FAO 1986. Basic Data Unit, Production Account, Unpublished May 1986 Update.

Haverkort, A. 1983. Letter to D. Horton, CIP, January 3 1983. International Potato Center.

Haverkort, A. no date. Adoption of Potato Seed Storage in Central Africa. International Potato Center.

Scott, G. 1988. Potatoes in Central Africa: a Study of Burundi, Rwanda, and Zaire. International Potato Center.